

ABSTRACT OF THE DISCLOSURE

An image sensor includes at least first and second photo-sensitive regions; a color filter array having at least two different colors that selectively absorb specific bands of wavelengths, and the two colors respectively span
5 portions of predetermined photo-sensitive regions; and wherein the two photo sensitive regions are doped so that electrons that are released at two different depths in the substrate are collected in two separate regions of the photo sensitive regions so that, when wavelengths of light pass through the color filter array, light is absorbed by the photo sensitive regions which photo sensitive regions
10 consequently releases electrons at two different depths of the photo sensitive regions and are stored in first and second separate regions; at least two charge-coupled devices adjacent the first photo sensitive regions; and a first transfer gate associated with the first photo sensitive region that selectively passes charge at first and second levels which, when at the first level, causes the charge stored in
15 the first region to be passed to one of its associated charge-coupled devices, and when the transfer gate is at the second level, charge stored in the second region is passed to one of the associated charge-coupled devices.